

WHAT IS CLAIMED IS:

1. A system for transmitting an optical signal to a plurality of receivers comprising:
 - an optical transmitter for transmitting the optical signal, wherein the optical signal is allocated in a number of time slots corresponding to the plurality of receivers;
 - a time-dividing device for time-dividing the optical signal received from the optical transmitter,
 - wherein the optical signal is time-divided for a receiver by bending the signal with the time-dividing device at the time slot corresponding to the receiver so the receiver can receive the bent optical signal, wherein the bent optical signal includes information just for the receiver.
2. The system of claim 1, further comprising an end device, wherein the bent optical signal is transmitted to the end device from the receiver.
3. The system of claim 1, wherein the optical transmitter comprises a laser.
4. The system of claim 1, wherein the optical transmitter comprises a microwave source.
5. The system of claim 1, wherein the optical transmitter comprises a radio frequency source.
6. The system of claim 1, wherein the time-dividing device comprises a catadioptric device.
7. The system of claim 1, wherein the time-dividing device comprises a rotating mirror.
8. The system of claim 1, wherein the time-dividing device comprises an optical switching device.
9. A system for time-dividing an optical signal for a plurality of receivers comprising:

3 an optical transmitter for transmitting the optical signal, wherein the optical
4 signal is allocated in a number of time slots corresponding to the plurality of receivers;
5 a catadioptric device for time-dividing the optical signal received from the
6 optical transmitter,
7 wherein the optical signal is time divided for a receiver by bending the signal
8 at an angle with the catadioptric device at the time slot corresponding to the receiver so the
9 receiver can receive the bent optical signal, wherein the bent optical signal includes
10 information just for the receiver.

1 10. The system of claim 9, further comprising an end device, wherein the
2 bent optical signal is transmitted to the end device from the receiver.

1 11. The system of claim 9, wherein the catadioptric device is a reflective
2 device.

1 12. The system of claim 9, wherein the catadioptric device is a refractive
2 device.

1 13. The system of claim 9, wherein the optical transmitter comprises a
2 laser.

1 14. The system of claim 9, wherein the optical transmitter comprises a
2 microwave source.

1 15. The system of claim 9, wherein the optical transmitter comprises a
2 radio frequency source.

1 16. A method for time dividing an optical signal for a plurality of
2 receivers, the optical signal including a plurality of time slots corresponding to the plurality
3 of receivers, the method comprising:

4 transmitting the optical signal;

5 bending the optical signal at a plurality of angles at the plurality of time slots,
6 wherein the optical signal is bent at an angle so a receiver corresponding to the time slot can
7 receive the signal, wherein the bent optical signal includes information just for the receiver.

1 17. The method of claim 16, further comprising transmitting the bent
2 optical signal to an end receiver.

1 18. The method of claim 16, wherein bending the optical signal comprises
2 reflecting the optical signal.

1 19. The method of claim 16, wherein bending the optical signal comprises
2 refracting the optical signal.

1 20. A method for time-dividing an optical signal for a plurality of
2 receivers, the optical signal including a plurality of time slots corresponding to the plurality
3 of receivers, the method comprising:
4 transmitting the optical signal;
5 time-dividing the optical signal at the plurality of time slots, wherein the
6 optical signal is bent so a receiver corresponding to the time slot can receive the signal,
7 wherein the bent optical signal includes information just for the receiver.

1 21. The method of claim 20, further comprising transmitting the bent
2 optical signal to an end receiver.

1 22. The method of claim 20, wherein bending the optical signal comprises
2 reflecting the optical signal.

1 23. The method of claim 20, wherein bending the optical signal comprises
2 refracting the optical signal.